

The Role of External Support in Civil War Termination

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Abstract

Many studies highlight the role that international intervention can play in prolonging civil wars. Yet, direct military intervention is just one way that external actors become involved in civil conflicts. In this paper, a model is developed and analyzed that shows that when the government is unsure about how external support to the rebels will help rebel war making capacity, it is the government that will continue fighting rather than settle the dispute. Different types of external support to rebels influence their fighting capacity differently, and some types of support create uncertainty about how new resources will translate into war making ability. Specifically, more fungible sources of support (such as direct financial support) generate the most uncertainty for states as they attempt to estimate the effect of support to rebels on the conflict. Increased uncertainty inhibits bargained settlement, and disputes characterized by fungible external support are less likely to end than those where rebels receive different kinds of support. Empirical analyses demonstrate strong support for this argument; rebels that receive highly fungible external support (money and guns) are less likely to see conflict termination than rebels that do not.

Civil wars have become the dominant form of armed conflict in the international system in the past few decades. These internal conflicts have proven exceedingly difficult to resolve (through either negotiated settlement or victory by one side) and a number of factors have contributed to this, from multiple warring parties to rough terrain, to military interventions.¹ Moreover, while these wars often occur within a single state, the international community seldom treats civil wars as solely a domestic problem for governments facing such challenges. Individual states and international organizations get involved in these disputes in a number of ways, both humanitarian in nature and overtly self-interested.² Yet, despite the concerted effort by the international community aimed at ending civil wars, internal conflicts are frequently long lasting and hard to resolve conclusively.

Existing literature demonstrates that third parties external to a civil war can play both conflict promoting and conflict inhibiting roles. Guarantees by third parties make negotiated settlements more likely (Walter 2002). Direct external support to states and rebels, in contrast, has been identified as playing a significant role in prolonging civil wars on average (Regan 2002). In general, this literature has focused on the effects of direct external support, including how it can generate a conflict sustaining balance of power between actors, its potential for conflict management, and how third parties can introduce additional veto players that make settlement more difficult. These approaches are all rooted in the idea that “support” or a “guarantee” will be in the form of military might (i.e., allocation of troops or direct military intervention).

Yet, we know empirically that there are other types of support provided to combatants in civil war. We argue that not all forms of support offered in civil war will have commensurate effects, and different types of support (such as monetary support, arms, information, and the ability to base in an external territory) can have different effects on the chance of civil wars ending. Specifically, we argue that the most fungible resource given to rebels in civil war (particularly direct financial support) generates uncertainty about rebel capability, and this in turn decreases the chance of resolution by increas-

ing uncertainty about possible settlement options and exacerbating rebel commitment problems that prohibit settlement. In our empirical analysis, we find varying effects of different types of external support to rebels. We find that providing more fungible types of support (such as financial support or arms transfers) corresponds with a decreased chance of civil war termination, but other types of support do not have this effect or have an opposing effect.

In this article, we propose a micro-foundational story for the government's often observed reluctance to sign a peace agreement when the rebels are receiving external support. Our explanation is linked explicitly to how fungible the external support for rebels is, and the government's uncertainty surrounding how such support translates to fighting power for rebels. As the ongoing civil war in Syria demonstrates, the extent and nature of support to rebels can be extremely unclear. The Syrian opposition appeared to believe support was forthcoming at the outset of the war, while the regime had been skeptical about what that support would look like. Open debate within external states, particularly the United States, over *whether* and *how* to support the Syrian opposition is just one example of the tenuous nature of such support. Similarly, while Russia is clearly supporting separatists in eastern Ukraine, the extent, continuation of, and effects of that support are debated, making it difficult to predict the future course of the war.

The possibility of (and uncertainty surrounding) support to rebels plays a key role in rebels' and governments' assessment of rebel prospects in war. Rebels have differential ability to bear the costs of conflict and to attack the state, which are a key part of determining when rebels should want to fight or settle with the state.³ Using a formal model, we argue that rebels that receive highly fungible financial support have a higher possibility of quick changes in their ability to bear the costs of war. These changes in ability to bear costs undermine rebels' promises about settling with the state. Negotiations to resolve civil war often span years and governments may see the resolution process as a strategic waiting period that rebels use until their fortunes change when rebels have relied on external support.⁴ Thus, civil wars where rebels have quickly changing war making

abilities will be longer. Employing a novel formal model, we find that the effect of highly fungible external support is as likely, if not more likely, than a shift in military power to prolong conflict (which has been the dominant explanation of conflict-lengthening commitment problems to date). This explanation differs from the typical treatment in the existing literature because it is the *rebels'* inability to agree to any peaceful resolution of the dispute that the government would find profitable compared to continued fighting, not the government's inability to agree to a settlement, that causes civil conflict to persist (Fearon 1998, Fearon 2004, Powell 2004, Powell 2006).⁵ The uncertainty concerning how different types of external support influence rebel war making capacity and not simply rapid shifts in power creates conflict sustaining bargaining problems. Therefore, it is a combination of the government's uncertainty about the rebels' expected utility of fighting (a product of the cost and benefits it anticipates) and the nature of the external support that rebels receive that combine to prolong civil conflict. This deduction from the formal model is evaluated with historical data on civil wars over the time period 1989-2011. The analysis shows a robust empirical relationship between highly fungible external support to the rebels and civil war termination.

This article makes several contributions to our understanding of civil war. We show formally that external support to rebels can inhibit settlement beyond simply creating parity between rebels and the state. Different types of external support have different effects on bargaining between states and rebels. We are also the first to demonstrate systematically in a large-N study the conflict-promoting role of highly fungible external support to rebels. Rebels that receive highly fungible external support from parties external to the conflict are the least likely to see war end. This suggests an alternative explanation for the link between external support and conflict duration.

External Support and Civil War

Support to combatants in civil war is argued to have varied effects on whether conflict is resolved. Scholars have emphasized the role that intervention plays in creating or sustaining a balance of power among parties to a civil war (Balch-Lindsay and Enterline 2002; Licklider 1993). Some argue that it is a balance of capabilities that allow war to continue as neither side is able to achieve military victory.⁶

Others suggest that the goals of the intervener are critical to determining the effect of intervention. Regan (2002) shows that unilateral interventions generally lead to longer civil wars, but that “unbiased” interventions can shorten wars. Cunningham (2010) demonstrates that when a third party brings an independent agenda to the dispute (that is, the intervener has goals distinct from any warring party), civil wars are longer. Walter (2002) shows that the threat of intervention in the post-conflict stage of a dispute can help resolve civil war, while Cetinyan (2002) shows the key role that potential external intervention can play in conflict situations.

Most of these studies focus on direct military intervention (or the threat thereof) by third party states. Studies that explore a broader set of actions and actors have not emphasized the degree to which support for rebels is a tenuous endeavor. Corbetta and Dixon (2005) examine external intervention in terms of diplomatic, economic, and military intervention in their exploration of whom intervenes. Regan and Aydin (2006) also show that when we include mediation in our understanding of intervention, diplomatic interventions can help resolve civil wars.⁷

Though much of the existing work on external support in civil wars has focused on direct intervention, there are a number of ways that outsiders provide support to parties in a civil war. Salehyan (2009) shows the importance of territory provided by neighboring states in sustaining insurgency. Byman (2007) highlights how states support conflict more generally through the funding of terrorist groups.

Moving beyond large-scale interventions by states and the contribution of troops, sup-

port to rebels is diverse and multifaceted, occurring in a number of ways and coming from a variety of different actors. Using new data from the Uppsala Conflict Data Project on types of support to rebel groups, we see a variety of scenarios of external support. These data include yearly information of the type of support given to rebels (including funding, arms, direct troops, intelligence, and territorial shelter) and the provider of support, including states and non-state actors (such as other rebel groups or diaspora populations). For example, Palipehutu-FNL in Burundi received external support in several forms from different actors over time. The group had some access to territory in the DRC and received support in terms of weapons, training and intelligence in the early 2000s from Mayi-Mayi in the DRC, some support in the form of intelligence from the Democratic Forces for the Liberation of Rwanda, and from the Army for the Liberation of Rwanda in the late 1990s. The Kurdish Worker's Party in Turkey also highlights the variability of support to rebels. Between 1984 and 2009, the Kurdish Worker's Party received support in the form of intelligence and territorial shelter from the Kurdish Democratic Party, territorial support from Syria and Greece, financial support from the Kurdish Diaspora, territorial and at times financial support from Iran, and intelligence from the Free Life Party of Kurdistan. Only the Kurdish Diaspora provided continual support to the Kurdish Worker's Party.⁸

External support to rebels then, is more nuanced than just intervention or not. Support for rebels can be complicated, coming from many sources, and is apt to change quickly, especially compared to the relative stability of government capabilities. Withdrawing financial support or intelligence and training can occur rapidly and likely with less oversight than either initiating or ending major military intervention.

The Rebels' Bargaining Problem

The stylized presentation of bargaining between the rebels and the government is often described as a process of the rebels making demands on the government, and the

government making concessions to the rebels.⁹ Yet, the government usually holds a disproportionate share of the bargaining leverage. Since most governments have a standing army, they are better equipped to impose their most preferred outcome through the use of force. Though rebels can try to induce concessions by inflicting costs on the state, there is little uncertainty in most cases about which side would win in the event of a fight to the finish that employed all resources because of this stark asymmetry in military capacity. The government knows that in a total conflict with the rebels, the odds are in its favor. The rebels also know this.

What keeps the government from simply using military force to eliminate the rebels is that conflict is risky and costly.¹⁰ The government is often uncertain about the rebels' utility for fighting, including their ability to bear the costs of continued fighting in light of different types of support they receive. Rebel groups often have highly variable resource endowments (whether from lootable resources or outside support). Walter (2009) argues that rebel groups must send a costly signal of their capacity before the government will agree to concessions because governments have strong incentives to only bargain with rebel groups that have the capacity to inflict high levels of damage. Although the rebels lack the military capacity of the government, the rebels are in a position to extract concessions from the government when fighting is costly for the government and the government is uncertain about the rebels' ability to continue fighting. Moreover, when the government is uncertain about the rebels' costs of fighting, the rebels have an incentive to misrepresent their true costs. If the rebels can convince the government that their costs of fighting are low, the rebels can extract more concessions from the government.

While the rebels can benefit from the government's uncertainty about their utility for fighting by bluffing their way to more concessions, these potential benefits do not come without risks. The risks to the rebels are two-fold. First, if the government is uncertain about the rebels' utility for fighting, the government may, based on the information they have about the rebels' expected costs and benefits, make an honest concession to the rebels that the rebels will reject, resulting in a continuation of civil conflict. That is, the

government offers less than it might be willing to give because it has incorrectly estimated the costs that rebels can bear and the benefits of fighting with the state. Second, if the rebels successfully convince the government that their costs of continued fighting are very low (in an attempt to gain more concessions), this may cause the government to prefer continued fighting to bargaining with the rebels. This is because the government may believe that the rebels have an incentive to continue or restart the fight in the future. This bargaining problem can cause the government to forgo making concessions and continue to fight.¹¹ When the rebels' costs of resuming fighting after bargaining are low, the government believes that the rebels will have difficulty agreeing to any present day peace settlement. Knowing this, the government prefers to continue fighting.

Highly Fungible External Support and Uncertainty

Rebel recruitment, funding, and extractive capacity are variable across rebel groups, and likely to vary within them as well (Gates 2002; Weinstein 2005). Rebel access to natural resources can be stymied by the state they fight. Gates (2002) highlights the challenges of preventing defection in rebel armies and the necessity of doing so if the rebels want to present a serious challenge to state. While some factors that influence the recruitment and retention of soldiers may vary infrequently (such as ideology and ethnicity), others (such as the existence of competing rebel groups) are more variable.

External support also varies for rebel groups over time, with different types of support offered in some times but not others, and different actors offering different types of support.¹² Different types of support are more or less fungible and this affects the certainty governments have about exactly how support translates into fighting power. For example, direct troop support (the lending of soldiers to rebel groups) is not very fungible. Rebels must use the troops to fight and presumably must do so in a timely manner (i.e., these troops cannot be held in reserve for long periods of time). In contrast, financial support is highly fungible. It can be used in a variety of ways by rebels to aid

in their struggle (used to gain arms, food, transportation or local compliance), or rebel leaders can divert it entirely for other goals.¹³ Financial support can be used to build up the infrastructure of the group, through material capacity, training, or local public goods provision to build and maintain a support base. Likewise, weapons given to rebels are fungible than some other types of support. Highlighting the complexity of rebel sources of support in war making, Hazen (2013) demonstrates that acquiring and maintaining military capacity can be a challenging endeavor for rebel groups. Supply networks must be maintained carefully, and the ability of rebel groups to convert resources (such as oil or other looted goods) is highly dependent on black markets that can be unpredictable. Highly fungible external support, then, will not always lead to an immediate or even medium term increase in rebel power, it depends on how rebels invest it.

In addition to the variability of rebels' resources and external support, actions by the state can alter the costs that rebel group bear. Most rebels are likely to face a much stronger opponent, one that may not be using its full strength to fight insurgents. States engaged in low-level civil wars, for example, do not bring the totality of their force to bear on domestic opposition. Given these factors, it is likely that rebels have less continuity in anticipated costs than we might assume they do having applied a model of conflict developed for states. That is, the costs of war, and the ability of rebels to bear them, are not likely to be constant over time in a conflict.

This lack of comparability and consistency in the ways in which external support will influence rebel war making capacity - and in what time frame - creates uncertainty for states about what kind of bargain might settle the dispute, and whether the rebel group can be trusted to abide by this bargain when their costs of fighting fluctuate and are likely to do so into the future. A central implication of this, shown in the model below, is that certain types of external support can create credibility and commitment problems that hinder a bargained settlement.

Model

The purpose of this model is to illustrate how external support shapes the duration of an ongoing civil war. To make this illustration, consider the case of two risk-neutral actors, the government (1) and the rebels (2) in an ongoing civil war, bargaining over the terms of a peace agreement which has benefits that are continuously divisible and represented by the interval $[0, 1]$. If the actors reach a peace settlement, the agreement is represented by the pair $(x, 1 - x)$ and the civil war ends. The government's share of this agreement is $x \in [0, 1]$, and the rebels' share is $1 - x$. The preferences of the government and the rebels are strictly opposed such that $u_1(x) = x$ and $u_2(1 - x) = 1 - x$. The game begins by the government either continuing to fight the rebels or making them a take-it-or-leave-it peace settlement offer $x \in [0, 1]$. If the government continues to fight the rebels the outcome of the continuation of conflict depends on the probability that the government wins the conflict, p . The rebels win the conflict with the complementary probability $1 - p$. Continuing to fight is costly for both the government and the rebels. Therefore, both pay costs $c_i > 0$ when fighting. The government's expected payoff from continuing to fight is $p - c_1$ and the rebels' expected payoff is $1 - p - c_2$.¹⁴

In lieu of continuing to fight, the government can offer the rebels a peace settlement. If the government bargains with the rebels and the rebels accept the peace settlement, the payoff to the government is x and the payoff to the rebels is $1 - x$. If the government offers the rebels a peace settlement and the rebels reject the settlement, civil war resumes and the outcome is determined by the new balance of power $\hat{p} \leq p$. The payoff to the government from fighting after offering a peace settlement to the rebels is $\hat{p} - c_1$. If the rebels continue to fight after bargaining with the government, the rebels may receive external support that gives them benefits, $e \geq 0$ and the opportunity to rebuild their forces $\hat{p} \leq p$.¹⁵ The payoff to the rebels from fighting after bargaining with the government is $1 - \hat{p} - c_2 + e$. External support can reduce the rebels' costs of continued fighting and therefore raises their expected value for resuming conflict.¹⁶ If both actors are fully

informed about the parameters of the game, the government will continue fighting the rebels rather than offering a peace settlement if $e > (\hat{p} - p) + (c_1 + c_2)$. Otherwise, the government will offer the rebels $x^* = \hat{p} + c_2 - e$, and the rebels will accept this peace settlement.¹⁷ The structure of this game is shown in Figure 1. Although the protocol of the game is simple, it is consistent with other models of civil war duration (Fearon 2004), and the results from games such as this tend to converge to results obtained from more complicated repeated games (Fey and Kenkel 2013).

Figure 1 About Here

If the value of the rebels' external support is greater than the difference between the shift of power and the total costs of civil war, $e > (\hat{p} - p) + (c_1 + c_2)$, the government will continue fighting the rebels rather than offering them a peace settlement. If the government continues to fight the rebels rather than offer a peace settlement, it is because the rebels are unable to agree to honoring the government's peace settlement. This bargaining problem is caused by the external support received after bargaining with the government. It is interesting to note that this break down in bargaining, caused by external support, can arise even when there is no shift in the distribution of power (e.g., when $\hat{p} = p$).

When the government and the rebels are fully informed, the game is solved for the Subgame Perfect Equilibria. Depending on the values of the parameters in the model there are two possible equilibria. When the parameters \hat{p}, p, c_1, c_2 combine to be less than e , then the government offers the rebels a peace settlement, and the rebels always accept. Otherwise, the government prefers continued civil war to a peace settlement with the rebels.

When the government is uncertain about the benefits that the rebels will receive from external support, it is possible for the government to make the rebels a peace settlement that is rejected. To incorporate this dynamic, assume that the rebels know their own benefits from external support, but the government only knows that the benefits

of external support is drawn from a uniform distribution with a lower bound of 0 and an upper bound of e^+ , $e \sim U[0, e^+]$. Introducing asymmetric information about the rebels' benefits from external support makes the government's decision to continue fighting or to offer a peace settlement more complicated and results in the usual risk-return trade-off: the government weighs the benefits and the costs of making the rebels a peace settlement offer. The game with asymmetric information is solved for Perfect Bayesian Equilibria, and there are three possible equilibria that depend on the parameters in the model. These equilibria are shown in Figure 2 and described in the Appendix.

Figure 2 About Here

In this figure the government's payoffs are shown on the y-axis, and the value of e^+ is shown on the x-axis. The line shows how the government's payoffs change with changes in their beliefs about how beneficial external support is to the rebels. There are three regions delimited with dashed lines. The left region shows the case where e^+ is small. In this region, the government offers the rebels a peace settlement and the rebels always accept the government's offer. This happens when $e^+ < \frac{c_1+c_2}{2}$. The rebels accept the government's offer in this region because their costs of continuing the civil war are relatively high.

The region in the center shows the case where the government offers the rebels a peace settlement that the rebels may or may not accept. In this region, the government's beliefs about the upper bound of benefits from external support is: $\frac{c_1+c_2}{2} < e^+ \leq \frac{(c_1+c_2)^2}{4(p-\hat{p})}$. In this middle region, when civil war continues it is because of asymmetric information about the benefits of external support. When $e^+ = \frac{(c_1+c_2)^2}{4(p-\hat{p})}$, the government is indifferent between offering the rebels a peace settlement and continuing to fight. The region to the right shows the case where e^+ is sufficiently large and the government never offers the rebels a peace settlement. As a result, civil war continues without any bargaining because the rebels have a commitment problem. The government believes that the benefits from

external support are potentially so great that they would prefer fighting to negotiation with the rebels.

When the government is unsure about how external support will benefit the rebels, a peace settlement is only sure to work when the upper bound on the benefits of external support is small relative to the costs of continuing to fight. As the upper bound on the rebels' benefits from external support increases, fighting is more likely because the rebels are more likely to reject any peace settlement from the government, and the government is less likely to be willing to negotiate with the rebels.

Empirical Implications and Analysis

A critical consequence of this simple model is that external support to rebels can have important implications for the prospects of civil war termination.¹⁸ Support can create uncertainty about potential settlements, or can preclude the possibility of settlement entirely if it generates a serious commitment problem for rebels. We have argued that how fungible the external support is will have a critical impact on the uncertainty it generates for states. Highly fungible external support is most likely to play this role because this type of support can be easily diverted to non-war aims or redirected back towards fighting capacity, and also can be used in a variety of ways that sustain the rebellion but do not always increase fighting power immediately.

To evaluate the expectations that follow from the model, we examine the relationship between different types of external support and conflict termination, using data from the Uppsala Conflict Data Program (UCDP) database on both external support and war termination.¹⁹ The central mechanisms we advance here are uncertainty created by fungible support and the rebels' inability to commit credibly to a war ending settlement when the effects of support are variable, which we argue confound the bargaining process and prolong the conflict. To test our expectation about highly fungible external support, we need to compare types of support in terms of how fungible they are.

Examining several categories of support, we argue that financial support should be the most fungible, as it can be used in diverse ways. Arms transfers are also relatively fungible. Though arms can translate directly into force against the state, they can also be sold or traded for other goods. Moreover, rebels could easily use arms against other targets. Other types of support appear less fungible. Intelligence given to rebels is likely to be contextually relevant, and not necessarily something that can be bartered with in most instances. Troop support from external actors is likely to be un-exchangeable. Troops may come under direction of the rebels, but retain allegiance to the third party and while donated troops may engage in violence against other targets, they are likely to be constrained by the third party’s agenda. Finally, territorial sanctuary for rebels can be used as a rebel base and for regrouping, but also is unlikely to be transferable or to have a variable effect over time. Rebels have access to sanctuary or they do not. Thus, we can conceptualize categories of limited and highly fungible external support, with financial support being the most fungible of sources of support, arms as fungible, and less fungible support including intelligence, troops, and territory.

External Support and Conflict Termination Data

The dataset consists of 133 intrastate conflicts occurring between 1989 and 2011²⁰ and observes UCDP’s criteria for inclusion as an armed conflict. UCDP defines armed conflict as: “a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in a year.”²¹ The unit of analysis is a dyad-year, with 287 state/rebel group dyads in the data. Conflict termination is defined as the last year when the level of violence meets the UCDP defined threshold of 25 battle deaths per year and stays below this threshold until the termination year of the data in 2011.²² Empirically, termination can occur in several ways, including a full resolution of the underlying dispute, an explicit negotiated end to fighting, or a waning of violence between the combating parties.²³ We examine the effects of different types of

support to rebels on all types of war termination because while our argument is about incentives to resolve the dispute, many other factors can play a role in determining what exactly that resolution looks like (including particular interests of third parties or regional players, capabilities of both sides, the history of political compromise among parties to the disputes, etc.). It unclear that there will be a formal negotiated peace agreement in all cases where the dispute is settled through bargaining. Conflicts that peter out or those that end suddenly may do so because rebel goals have been sufficiently met through reform regardless of whether rebels have signed a peace agreement. Moreover, negotiation processes often involve multiple stages in which concessions may fail to end the war immediately, but implementation of these concessions may contribute meaningfully to the eventual termination. Conflict termination occurs in 24.09% of all dyad-years.

We argue here that highly fungible external support has a negative effect on the likelihood of a conflict ending. To evaluate the effect of this type of support for rebels, we use the disaggregated UCDP coding of external support. Financial support can come from a number of sources, including third party states, other rebel groups, as well as non-state actors such as Diasporas. The type and source of all external support is provided by the UCDP data.²⁴ The financial support indicator is a dichotomous variable, coded as one if a third-party provides monetary or economic aid including military loans, military grants, and economic support to multilateral financial institutions; however, the coding of funding employed here does not include development or humanitarian aid.²⁵ Sixty-four rebel groups in our study (or about 22%) receive external financial support during their dispute with the state. Among these, 49 groups (about 77%) receive this support intermittently (i.e., not every year throughout the dispute). The Data Appendix provides additional information on trends in which rebel groups receive external support.

Our central focus here is on the effects of financial support to rebels because we argue that this is the most fungible resource and is a potent source of uncertainty about rebels' ability to bear the costs of conflict.²⁶ However, we would be remiss to ignore the variety of other types of support given to such groups, or to consider the potential effect of external

support to states that might balance these influences. In Table 1, we provide four sets of analysis. In Model 1, we consider just the effect of financial support to rebels and control only for factors affecting the balance of power between the rebel group and the state. We include a measure of the strength of each side of the dispute in the form of the state's and rebel group's number of troops log transformed. Others have suggested that a balance of power between combatants will make settlement unlikely. Civil wars fought with relatively strong rebel groups tend to be shorter when compared to civil wars fought against a rebel group that is weak relative to the state (Cunningham, Gleditsch, and Salehyan 2009). Thus, we control for the relative balance of power between the government and the rebels. We use two indicator variables for this. One is a binary variable for rebel groups that are strong relative to the state (rebel advantage) with regards to troop size and another is a binary variable for rebel groups that are at parity with the state (rebel parity) in terms of the number of troops (with relatively weak rebel groups as the base category).

Rebel advantage means that rebels have more troops than the state. Parity between rebels and the state means that they have the same number of troops.²⁷ The balance of power in most conflicts favors the state. Only 2.90% of rebel groups have an advantage in terms of troop size over the state in a given year. Approximately 1.10% of the dyads are at parity leaving the state with the advantage in 96% of all dyad-years.²⁸

In the second set of statistical models (Models 2 through 5), we include measures of a variety of different types of support that have different degrees of fungibility. First, weapons support is an indicator of whether the group received a donation, transfer, or loan of weapons or ammunition. While not as innately fungible as money, arms are fungible in the sense that they can be traded for other goods, or used against alternative targets (such as competing rebel groups). Weapons support is received by 31.36% of rebel groups. Given that this type of support is fungible, we expect a negative effect of weapons support on the likelihood of termination.

Second, we include a measure of whether a rebel group received intelligence from a

third party in a given year. Intelligence support is coded as present if a third party provides any type of intelligence materials. Such materials include maps containing the position of enemy troop movements, cryptographic keys, satellite images, and any sort of signals intelligence.²⁹ This type of support is given to about 2% of rebel groups in the study.

A third type of support we include in the analysis is troop support. This type of support, which is what much of the existing literature emphasizes, is measured as a dichotomous indicator of whether a third party contributed troops to the rebel forces in that year. About 7% of rebel groups receive external troop support. This coding does not include technicians, military trainers or specialists. The troops must be engaged in on-the-ground battle. Support in the form of troops should directly increase the force that rebels can bring to bear against the state and may increase the chance that rebels can gain concessions or achieve victory.

Finally, we include is a measure of territorial support. This variable indicates whether a third party allowed the rebel group access to territory outside the dispute, including sanctuary or bases. As border crossing is common in civil conflicts particularly when state control is weak and borders are not well protected, territorial support is only coded if it can be shown that a third party deliberately provided territorial sanctuary or support to the rebels. About 14% of rebel groups in the study receive territorial support at some point during their conflict. All of the external support measures are drawn from the UCDP data.

Previous work suggests that external factors that increase parity (or perceptions of parity) among warring parties will decrease the chance of war end.³⁰ Our argument does not contradict this expectation. However, we argue that when external support is highly fungible, its effects on the conflict will be less unclear, exacerbating uncertainty about both rebel fighting capacity and settlement possibilities in the dispute. Thus, our expectation in comparing types of support is that more fungible supports will decrease likelihood of war end, but less fungible supports will not necessarily do so.

In Models 3 through 5, we also include additional controls drawn from the literature to assess the robustness of our finding on fungible external support. First, we include a dummy for whether the disputes had intervention by a third party that is considered to bring independent preferences to the disputes. Wars with this type of intervention are likely to be more difficult to resolve (Cunningham 2010). Second, we include a dummy variable to indicate whether the rebel group has a legal political wing, which Cunningham, Gleditsch, and Salehyan (2009) show to be associated with which rebels receives external support. Third, we include measures for several state-level factors commonly found to be associated with a higher probability of civil war. These include gross domestic product (logged) (Fearon and Laitin 2003; Hendrix 2010), whether the state is democratic (Hegre, Ellingsen, Gates, and Gleditsch 2001), the population of the state (logged) (Raleigh and Hegre 2009) and whether the state is an oil producer (Fearon and Laitin 2003).³¹ Fourth, in addition to the different types of external support rebels receive and controls from the extant literature, we include a measure of external support to states in Models 4 and 5. We include a dummy variable for whether the state received any support from a third party in that year (coded from UCDP).³² Support to a state may alter the state’s willingness to seek resolution to the dispute through settlement with the rebels. It could also lead states to try for outright victory in some instances. External support is provided to states in 56.38% of all dyad-years.

Finally, we address issues of time dependence that arise when using dyad-year data in Model 4. There is some debate regarding how to appropriately model issues of time dependence with binary dependent variables. Beck, Katz, and Tucker (1998) were the first to suggest incorporating binary time variables or splines to account for time dependency. However, as Carter and Signorino (2010) note, time dummies can be problematic due to inefficiency and separation, particularly in binary logistic regression. Following Carter and Signorino (2010), we incorporate three variables: t , t^2 , and t^3 to specifically account for issues of time dependence.

Analysis of Conflict Termination

We present three types of analysis in support of our argument that highly fungible external support makes conflict termination less likely. The first are a set of logistic regressions on the probability of war end. The second are duration models on time to war end. The third set of models employ instrumental variable analysis to address the challenges of endogeneity in the study. Across all of these alternative empirical strategies, we find consistent and strong support for our argument that highly fungible external support makes ending civil war more difficult.

Table 1 presents the logistic regression analyses of different types of external support, beginning with financial support as the most fungible type of support, and adding other types of support and additional controls in each model.³³

Table 1 About Here

As expected, financial support to rebels has a consistently negative and statistically significant effect on the likelihood of the civil war coming to an end. This decrease in the chance of termination is substantively important. Wars are approximately two and a half times less likely to end when financial support is given to rebels.³⁴ When rebels do not have external financial support, the predicted probability of the conflict ending is about 23.27% in a given year; when rebels are supported with funds by an external actor, the mean predicted probability of conflict termination is about 11.16%.³⁵ This is consistent with our argument that external financial support creates uncertainty about the rebels' ability to bear the costs of war that can cause a conflict promoting credibility problem for rebels.

Externally provided arms have a similar effect on the chance of war end. Weapons support to rebels decreases the mean predicted probability of conflict termination in a given year. When rebels do not receive weapons support, the mean predicted probability of conflict termination is approximately 23.81%; when rebels receive weapons from a third party, the mean predicted probability of conflict termination decreases to about

10.38%.³⁶

Direct troop support to rebels had a positive effect on the likelihood of war termination in three of four models. An end to fighting is approximately two times more likely when rebels get troop support as when they do not receive this type of external support. When rebels do not have external troop support, the mean predicted probability of the conflict ending is about 19.50%, when rebels are supported with troops from an external actor, the mean predicted probability of conflict termination is about 49.77%.³⁷ Neither territorial nor intelligence support yield a statistically significant finding for war termination.

This disaggregated examination of external support to rebels shows that the effects of support are not uniform, nor even in the same direction for the various types. Different types of external support have differential effects on conflict, which we miss when we examine just military intervention.

The results in Table 1 suggest that support to states has a negative effect on the chance of war ending, which is consistent with the literature on intervention more generally. The measure for rebel troop size returns negative and statistically significant coefficients in some specifications. The greater the size of rebel forces, the less likely war is to end in any given year. A move from the first to third quartile of values (from 1,000 troops to 10,000 troops) is associated with about a 7.73% decrease in the chance of war end.³⁸

These findings on the effect of external financial support and weapons support are robust to the inclusion of a number of other factors. The negative effect of these highly fungible external supports holds when we control for many variables, including established determinants of war termination and predictors of who is likely to receive external support. Thus, the analyses demonstrate an independent effect of highly fungible external support on the chance that the war will end.

The logistic regression analyses demonstrate support for our central hypothesis. In Model 4, we follow the recommendation of Carter and Signorino (2010) by including t , t^2 , and t^3 , which essentially inserts a hazard function into the model. To more directly examine the influence of external support on conflict duration, rather than a probability

of ending in any given year, we run a second set of analyses using the Cox (1972) semi-parametric, proportional hazards model.³⁹

Table 2 About Here

Table 2 reports the hazard ratios from four survival analyses that take into account the effect of different types of external support to rebels, as well as other factors, on conflict duration.⁴⁰ A hazard ratio of one suggests that the time to event, in this case conflict termination, is no different for rebels who receive external funding and those that do not. A hazard ratio that is significantly less than one suggests a longer time to conflict termination, whereas a hazard ratio greater than one indicates a shorter time to war end. In all models, the hazard ratio on financial support (the most highly fungible external support) is less than one and statistically significant. Direct financial support to rebels lengthens the conflict duration. Similarly, weapons support returns a statistically significant hazard ratio less than one. Both types of more fungible support make war longer. In contrast, the hazard ratios for other types of support are all greater than one, and the ratio for external troop support to rebels is significantly so.

Troop support to rebels leads to war end sooner than for rebels who are not aided with troops. Consistent with the results of the earlier models, these duration models also suggest that larger rebel and state armies serve to prolong the length of the conflict. This dynamic is mirrored by the state; external support to states serves to significantly prolong the duration of the conflict.

These models suggest that some rebel group characteristics affect the time to termination, as well. Rebels with legal political wings see termination more quickly than rebels without a politically legitimate branch. Conversely, increasing troop strength, both the rebels' and the states', prolongs civil conflict; however, this result is moderated by the relative strength of the fighting partner's army. When rebels have a power advantage over the state (or are even at parity with the state in Models 2 - 4), termination occurs more quickly than when the state has an absolute power advantage over the rebels. To

some extent, this result mirrors our finding of the effect of sending in troop support to rebels. Together, these results suggest that all else equal, civil war termination is more likely (Table 1) and occurs more quickly (Table 2) when rebels have an advantage in terms of on the ground strength.

Two state characteristics also affect the time to termination: GDP per capita (logged) and the size of the country's population (logged). Models 3 and 4 (at the 90% confidence level) suggest that as the state's per capita GDP increases, termination occurs more quickly. However, population size seems to have the opposite impact (Models 3, 90% confidence level, and Model 4) on the time to termination. These findings are consistent with the existing literature.

Both the logistic and cox duration models provide support for our argument that highly fungible external support has a unique effect of making conflict termination harder compared to other types of external support. Yet, since third parties choose to aid to rebels at least partly based on the characteristics of the civil conflict, there is potential for endogeneity bias. Endogeneity bias is a problem if third party financial aid is expected to be systematically correlated with unobservable factors related to the duration of civil conflicts. Lagging external support is a first step towards dealing with potential endogeneity; however, it is insufficient in dealing with potential omitted variable bias.⁴¹ We take a further step by employing an arguably more methodologically rigorous approach, the use of instrumental variables regression, whereby an instrumental variable is used to remove the potential bias in the estimated effect of external financial support to rebels on civil war duration. This instrumental variable should be correlated with external financial support to rebels, while also being uncorrelated with the unobservable factors related to conflict termination (the source of the endogeneity bias) (Angrist and Krueger 2001, Angrist and Pischke 2010). As a word of caution, instrumental variables (IV) analysis is not a panacea, and whether it provides an improvement is dependent on the research design and the additional assumptions imposed by the use of IV.

Drawing on the econometric literature of foreign aid and civil conflict (de Ree and

Nillesen 2009, Savun and Tirone 2011), and in particular the work of Savun and Tirone (2011), we employ *Donor GDP* as an instrument for external rebel financial assistance in an instrumental variables probit model. Donor GDP measures the yearly, average gross domestic product in millions of dollars (logged) of the three primary (OECD) financial aid donors, the United States, France, and Sweden. The data for this variable comes from the World Bank Development Tables and is measured in constant 2013 U.S. dollars. Donor GDP meets the two primary criteria for IV. Theoretically, we would expect that the GDP of the primary donor nations would affect the amount of financial support allocated to rebels engaged in civil conflict. Empirically, the results reported in Model 1 of Table 3, where we regress third-party financial support to rebels on donor GDP, support the use of donor GDP as an instrument for external financial support: donor GDP is a statistically significant predictor of third-party financial assistance to rebels ($p < 0.01$).

Second, the instrument should not directly affect the outcome variable, in this case conflict termination, except through the mechanism of the endogenous variable. Although it is difficult to precisely identify the channel through which the instrumental variable impacts the outcome, it seems unlikely that donor GDP has a direct impact on conflict termination beyond its effect through third-party financial assistance to rebels. There are two pieces of evidence to support its independence. First, since donor GDP provides a yearly measure of the top three aid donors' GDP, it is non-differentially associated across rebel groups in the given year, irrespective of variation in conflict dynamics. Second, results of empirical tests provide additional support. Both the Wald test of exogeneity, which tests that the correlation parameter ρ is equal to zero, and the Sargan-Hansen statistic, which provides a similar test of the null hypothesis that the instrument is uncorrelated with the error term (Wooldridge 2002), are statistically insignificant at the conventional 95% confidence level.⁴² Together, these results suggest that donor GDP is an appropriate instrumental variable for third-party financial aid to rebels. Table 3 presents the regression of external financial support on the instrument (Model 1) and in turn, the estimation of the effect of external financial support on conflict termination

through the use of the instrument, donor GDP (Model 2).

Table 3 About Here

The coefficient on external financial support to rebels is negative and statistically significant. Employing the instrumental variable analysis, we find that rebels that get this type of highly fungible support are less likely to see war end. Empirically, the conflict promoting effect of highly fungible external support persists when accounting for the potential endogenous allocation of third-party financial aid to rebels.⁴³ Troop support continues to have a significant and positive effect on conflict termination in this model, as does economic development as measured by GDP, while oil production retains a conflict-promoting role.

In sum, we have employed three different types of statistical analysis to examine whether highly fungible external support has a different effect on conflict than other types of external support, and whether it acts to prolong conflicts. We find substantial empirical support for this hypothesis; conflicts are harder to resolve when highly fungible external support is given to rebels.

Illustrating Variable Uses of Rebel External Support

Our large-N analyses provide a battery of support for the argument presented here. A brief look at some real world cases of external support to rebels will illustrate some of the dynamics we argue lead to the differential effects of external support. Specifically, we provide short anecdotal evidence demonstrating the varied use of financial and weapons support to rebels.

A central argument underpinning our model and findings is that financial support to rebels is fungible, and thus has somewhat unpredictable or uncertain effects on war making capacity of such groups. A few short examples illustrate the plausibility of this argument. First, the Liberation Tigers of Tamil Eelam (LTTE) in Sri Lanka received

external funding from multiple sources over time. They were initially supported by the Indian government, then the Indian state of Tamil Nadu. After a withdrawal of support from these initial sources in 1987, the group maintained a sophisticated network of support from the Tamil Diaspora in a number of countries. Mampilly (2011) puts the peak level of incoming support at two million dollars in one month during the most lucrative time for the rebel group.⁴⁴ These resources did not directly translate to fighting power. Instead, LTTE expended differing amounts of resources over time in setting up and maintaining local governance, including control of areas such as education, cultural activities, and food distribution (Mampilly 2011). Substantial resources were also devoted to fighting co-ethnic Tamil challengers (supported by the Sri Lankan government) that were seeking to supplant LTTE (Nordstrom 1992).

Moreover, Berman and Laitin (2008) demonstrate a critical role played by non-combat resource allocation in Hezbollah. They show how Hezbollah converted financial support into suicide terrorism through the provision of benign social services (such as hospitals and charitable organizations). These services are promised to families of individuals that participated in suicide attacks. Both the LTTE and Hezbollah examples illustrate ways that rebels use financial resources outside of directly building and sustaining capacity to fight the state. In particular, the Hezbollah example shows a time and cost intensive process that ultimately led to offensive capacity. Yet, it would be difficult to predict at the outset when and how financial support would produce the end result of suicide attacks, or whether this process would be sustainable over time.

Similarly, though arms are not as innately fungible as money, we see evidence of rebels using arms to secure other resources. In Liberia, for example, rebels have traded arms across the Cote D'Ivoire border for motorcycles. In Cote D'Ivoire, the Forces Nouvelles rebels have traded guns for food and other goods (Schroeder and Lamb 2006).

These brief examples serve to illustrate the plausibility of the assumptions underpinning our argument. Not all types of external support to rebels are directly translated into fighting capacity. Instead, more fungible resources are used in a variety of ways that

have an uneven and uncertain impact on the fighting capacity of rebel groups. This uncertainty, in turn, makes conflict termination more difficult by undermining the ability of rebels to commit credibly to a settlement, and by reducing the ability of state to identify possible agreements that might end the war.

Conclusion

While existing work has shown that direct intervention in civil war often prolongs wars, it has largely focused on what military intervention adds to the disputes (e.g., greater strength, creating a balance of power, or adding additional preferences). Here, we argue that external support is more nuanced than that. Different types of external support are more or less fungible, allowing recipients to use them for aims other than direct fighting. The degree to which external support to rebels is fungible or not conditions the impact it has on the bargain between states and rebel groups. Highly fungible external support leaves states and rebels uncertain about the rebels' short term fighting capacity and longer term incentives to countermand a possible settlement.

This argument is demonstrated through a formal model and supported by an extensive empirical examination of civil wars around the world. Using three different methodological approaches (logistic regression, duration analysis and instrumental variable analysis), we show that the most fungible types of external support are consistently associated with longer wars. Wars where rebels get financial support are more than two times less likely to end than when rebels do not receive this kind of support.

The contributions of this article are threefold. First, we provide a novel argument about why different types of external support have different effects on civil war. External support is diverse, yet examining it through the lens of how resources translate to war making capacity and how this connects to central bargaining problems that all civil wars face (uncertainty and commitment problems) allows us to make clear predictions about which types of support should lengthen war.

Second, we show theoretically and empirically how attempts to help rebels achieve their goals through financial support (or even arms transfers) may actually be harmful. Most actors offering funds to rebels ostensibly want to assist them in gaining something from the state, even if the chance of outright victory is low.⁴⁵ If, in addition to increasing the resources that rebels have, highly fungible external support exacerbates bargaining problems for rebels, then the net effect of supporting rebels may be to harm their cause.⁴⁶

A final contribution of the article relates to how we think about the duration of civil wars and their settlement. The existing literature that centers on disarming the rebels at war end focuses largely on the state as the source of bargaining problems that prevent the successful resolution of civil conflict.⁴⁷ This article offers an alternative perspective. If the state expects the rebels' costs of fighting to decrease (and overall capacity to increase) due to external support, and this external support is large enough relative to the government's expected value of fighting, continued fighting becomes more desirable to the government than negotiations and concessions. Thus, it is the rebels' inability to agree not to continue fighting, rather than solely that of the state, that leads to ongoing conflict.

Recognition of the differential effects of external support has important implications for third parties promoting conflict resolution. Withdrawing highly fungible external support from rebels, effectively reducing uncertainty about rebel war making capacity, can work to incentivize bargaining and concessions, and possibly open the door towards peaceful conflict resolution. Moreover, direct attempts at conflict resolution through diplomacy should directly address the role that highly fungible external support can play in preventing settlement. Our findings suggest that breaking the link between external supporters and rebels can facilitate settlement, not because it weakens rebels, but because it allows the state to see the rebels as more willing to agree to a peace settlement. More effort, then, should be focused on the impact of different types of external support on civil war bargaining and on mechanisms that the international community can employ to help combatants overcome these barriers to civil war settlement.

Notes

1. On average, civil wars last two and a half years; the longest running civil wars span multiple decades.
2. See Aydin (2010) on the strategic choice to intervene.
3. Both Salehyan (2009) and Cederman, Girardin, and Gleditsch (2009) emphasize how geography can play a role in prolonging civil conflict for rebels that base in foreign territory, or by making it difficult for states to enact reprisals on ethnic groups across borders.
4. Hazen (2013) provides several cases where rebels appear to negotiate in poor faith while building up supplies to fight.
5. One exception is Svensson (2007), who suggests that rebels have a commitment problem. He links this commitment problem to the idea that rebels gain greater bargaining leverage through the settlement process via legitimacy and access to official structures. Our focus here is on the effect of external support to rebels, which is not dependent on a particular settlement being achieved.
6. Zartman (1989) suggests that some longstanding balanced conflicts can become “ripe for resolution.”
7. There is a large literature on the mediation of civil wars, which is outside the scope of this study. The focus here is on direct support to rebels, as opposed to conflict resolution efforts.
8. Data on external support are from the PRIO/Uppsala Armed Conflict Database.
9. This conceptualization of the bargain is parsimonious, but excludes non-aligned actors or actors not directly participating in conflict that may influence conflict dynamics. See Kalyvas 2006; Staniland 2012; and Cunningham 2013.
10. It is also possible that major attacks on rebels could lead to negative international attention and potentially to international censure or intervention favoring the rebels.

11. Salehyan (2009) also highlights the bargaining problems that rebels face when based on foreign territory.
12. See Salehyan, Gleditsch, and Cunningham (2011) on the incentives for outside actors to support rebels.
13. Competing arguments exist about the role that fungible resources will have on leader incentives at the state-level, particularly with regard to the decision to democratize. See Boix (2003) and Freeman and Quinn (2012).
14. We think of the probabilities as expected shares of the outcome, commonly known; so, if the payoffs are $p - c_1$ and $1 - p - c_2$, then that means one side receives p and the other $1 - p$, as fractions of the whole.
15. It may also be the case that the rebels are receiving external support before bargaining with the government. To simplify the model and without loss of generalizability, we normalize any external support to the rebels prior to bargaining to be equal to 0.
16. The effect of the benefits of external support, e , can make the rebels more optimistic about fighting the government by increasing the probability that the rebels prevail and/or lowering the rebels' costs of fighting.
17. Although we treat external support as exogenous in this model, we acknowledge that the decision of third parties to lend external support is strategic. While we do not model this decision, the external support to the rebels might be thought of as the outcome of another game in which the supporter optimizes who to lend to and when to lend support based on the characteristics of the civil conflict.
18. The model also yields implications about how much governments are likely to concede, however we focus exclusively on the conflict termination implications here.
19. Uppsala Conflict Data Program (Date of retrieval: 14/07/01) UCDP Conflict Encyclopedia: www.ucdp.uu.se/database, Uppsala University.
20. If the conflict began prior to 1989, those conflict years were included in the dataset. Thus, the total years of conflict in this analysis extend from 1949-2011.
21. For further information, see

<http://www.pcr.uu.se/research/ucdp/definitions/>

22. Findings are similar if we use a two year break in fighting as a measure of termination.
23. Reiter (2009) and others have focused on the causes of different types of war end, and the consequences of it (see also Toft (2010)).
24. Among cases of external support to rebels, third party states provide support in approximately 75.58% of cases; outside rebel groups provide support in 27.68% of cases; Diasporas provide support in 14.46% of cases. Diasporas are identified by a single name (such as Kurdish Diaspora), but UCDP does not include location information for this type of actor. There is significant variation in the sources of support. To explore whether this had systematic influence on conflict termination, we ran additional models including the source of support. These analyses did not reveal any trends in who gives support and the likelihood of conflict termination, or have any independent effects on the chance of war termination.
25. All external support definitions are from UCDP.
26. To examine whether different types of support to states have similar effects, we reproduce our analysis in Table 1 with disaggregated measures of state support, reported in the Data Appendix Table 2. The sign and significance of coefficients on external funding types to rebels are similar to Table 1. Financial support to states also has a negative effect on conflict termination, though no other types of support to states have a statistically significant effect.
27. To be coded as at parity, the ratio of troops must be equivalent to 1.
28. In additional robustness checks, we used a ratio of state to rebel troops in lieu of these indicators. The results on external financial support remain negative and significant at the 0.05 level.
29. Intelligence support does not include use of a third party's satellites or other types of intelligence infrastructure.
30. Each of these types of support can be reasonably argued to decrease the chance of war termination. Timely intelligence can make rebels more effective even given that most

rebel groups are weak compared to the states they fight. More capable rebels may be less likely to be defeated, leading to a negative effect for intelligence support on war termination. Regan (2002) shows a generally negative effect on conflict termination when the intervention is in support of one particular side. Direct troop support to rebels may have a negative effect on conflict termination. Salehyan (2009) shows that rebels can more easily sustain a challenge to the state when they operate in sheltered territory. Thus, rebels receiving territorial support may be less likely to see war end in any given year.

31. In additional tests, we control for whether the conflict is ethnic in nature, whether the outcome of the conflict is a rebel victory, and whether the civil war could be classified as a coup. The results remain similar to the analyses presented in Table 1.
32. In an additional unreported test, we disaggregated the type of support given to states into troop support, financial support, and intelligence. These analyses show that both troop support and financial support provided to the state are associated with a decreased chance of war end.
33. As war termination is relatively rare, we reproduced these analyses using rare events logit (see King and Zeng (2001)). The results on external support are similar in sign and significance.
34. The method of calculation follows that of Hanmer and Ozan Kalkan (2013); specifically, the predicted probabilities are calculated while setting the explanatory variables to their observed values. Predicted probabilities are calculated by regressing conflict termination on the set of explanatory variables shown in Table 1, Model 4.
35. The first difference is statistically significant at the 0.05 confidence level.
36. Predicted probabilities are calculated by regressing conflict termination on the set of explanatory variables shown in Table 1, Model 4. The first difference is statistically significant at the 0.05 confidence level.
37. Predicted probabilities are calculated by regressing conflict termination on the set of explanatory variables shown in Table 1, Model 4. The first difference is statistically

significant at the 0.05 confidence level. It may be the case that the addition of troops only matters when power is relatively balanced between the state and the rebels. In unreported tests, we interact troop support with a ratio of state to rebel troops. These further analyses do not show a statistically significant interaction.

38. Predicted probabilities are calculated by regressing conflict termination on the set of explanatory variables shown in Table 1, Model 4. The first difference is statistically significant at the 0.05 confidence level.
39. As the Cox (1972) model assumes proportional hazard ratios across time, model misspecification can result in coefficient biases and reduced detection of statistical significance, we follow the advice of previous research on duration models (Box-Steffensmeier and Zorn 2001), and employ several tests to detect possible violations of the proportional hazards assumption, i.e., graphical methods and univariate tests. The results on the effect of financial support and weapons to rebels remains the same.
40. We use tests of equality to help guide which variables are included in each model: the log-rank test of equality across strata (non-parametric) for categorical variables, and Cox proportional hazard regression for continuous variables.
41. Reproducing these analyses with a one-year lag in external support returns coefficients of similar size and significance for external support.
42. P-value is equal to 0.082.
43. In an alternative test, we also control for the number of external supporters. See Data Appendix Table 4. The results on financial support are similar to the model presented here. More external supporters is associated with a greater chance of war end. Future research should address more directly how a diversity of supporters influences war dynamics.
44. Byman, Chalk, Hoffman, Rosenau, and Brannan (2001) suggest that more than 90% of LTTE funding is externally provided.
45. Some actors may also seek to use support to rebels to undermine a rival.
46. Kuperman (2008) addresses a similar issue with respect to humanitarian assistance, highlighting the moral hazard created when the international community responds to genocide

and ethnic cleansing.

47. Salehyan (2009) and Svensson (2007) are exceptions.

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Tables

Table 1: Determinants of Conflict Termination in Dyad-Year

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Rebel external support - funds	-1.118*** (0.280)	-0.963** (0.317)	-1.057** (0.347)	-0.940** (0.348)	-0.559† (0.330)
Rebel external support - weapons		-1.052*** (0.299)	-1.114*** (0.332)	-1.070** (0.329)	-0.861** (0.307)
Rebel external support - intelligence		0.374 (0.588)	0.390 (0.627)	0.501 (0.643)	0.539 (0.540)
Rebel external support - troops		1.555** (0.514)	1.510* (0.618)	1.627** (0.616)	0.798 (0.589)
Rebel external support - territory		-0.223 (0.369)	-0.198 (0.394)	-0.075 (0.395)	-0.200 (0.406)
log(Rebel troop size)	-0.185** (0.063)	-0.182** (0.067)	-0.225** (0.069)	-0.234** (0.073)	-0.176* (0.080)
log(State troop size)	-0.114† (0.061)	-0.139* (0.064)	0.001 (0.091)	-0.033 (0.100)	0.008 (0.104)
Rebel advantage - troop size	0.475 (0.437)	0.429 (0.475)	0.408 (0.507)	0.458 (0.557)	-0.148 (0.558)
Parity - troop size	0.512 (0.737)	0.217 (0.737)	0.275 (0.796)	-0.169 (0.827)	-0.646 (0.819)
Independent intervention			0.089 (0.358)	-0.026 (0.387)	-0.195 (0.403)
Legal political wing			0.472 (0.331)	0.448 (0.328)	0.251 (0.295)
log(GDPpc)			0.188 (0.186)	0.198 (0.195)	0.245 (0.210)
Democracy			-0.596 (0.386)	-0.577 (0.410)	-0.427 (0.447)
log(Population)			-0.148 (0.103)	-0.178 (0.114)	-0.089 (0.125)
Oil			-0.328 (0.411)	-0.321 (0.407)	0.013 (0.446)
State external support				-0.289 (0.227)	-0.236 (0.241)
t					-0.268*** (0.055)
t ²					0.009*** (0.003)
t ³					< -0.001** (< 0.001)
Constant	1.696* (0.764)	2.097** (0.793)	1.129 (1.879)	1.884 (2.009)	1.414 (2.185)
N	934	934	901	868	868
Pseudo R ²	0.06	0.08	0.10	0.10	0.15

Note: All statistical analyses were conducted using Stata version 12.0.

Reporting logistic coefficients with robust standard errors clustered on dyad.

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 2: Determinants of Conflict Duration (Cox Semi-proportional Hazard Models)

Variable	Model 1	Model 2	Model 3	Model 4
Rebel external support - funds	0.352*** (0.076)	0.376*** (0.088)	0.285*** (0.066)	0.356*** (0.089)
Rebel external support - weapons		0.450*** (0.106)		0.447** (0.113)
Rebel external support - intelligence		0.797 (0.486)		1.044 (0.657)
Rebel external support - troops		5.888*** (2.343)		5.718*** (2.556)
Rebel external support - territory		1.071 (0.294)		1.194 (0.351)
log(Rebel troop size)	0.774*** (0.036)	0.763*** (0.037)	0.761*** (0.037)	0.757*** (0.039)
log(State troop size)	0.804*** (0.040)	0.791*** (0.040)	0.867* (0.055)	0.823** (0.055)
Rebel advantage - troop size	2.848** (1.035)	2.855** (1.040)	2.775** (1.083)	2.356* (1.003)
Parity - troop size	3.279* (1.739)	2.839† (1.520)	3.484* (1.881)	1.772 (1.097)
Independent intervention			1.642† (0.483)	1.161 (0.378)
Legal political wing			1.796* (0.412)	1.884** (0.453)
log(GDPpc)			1.341* (0.175)	1.255† (0.173)
Democracy			0.748 (0.202)	0.770 (0.214)
log(Population)			0.869† (0.065)	0.813** (0.064)
Oil			0.910 (0.238)	0.808 (0.218)
State external support				0.624** (0.105)
<i>N</i>	934	934	901	868

Note: Reporting hazard ratios.

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 3: Rebel Financial Aid and Conflict Termination: Instrumental Variables Analysis

Variable	Model 1: Rebel Financial Support	Model 2: Conflict Termination
Rebel external support - funds		-1.723** (0.652)
<i>Excluded Instruments</i>		
Donor GDP	-0.215** (0.077)	
Rebel external support - weapons	0.259*** (0.071)	-0.062 (0.273)
Rebel external support - intelligence	-0.002 (0.206)	0.166 (0.641)
Rebel external support - troops	0.365* (0.170)	0.999* (0.496)
Rebel external support - territory	0.089 (0.074)	0.008 (0.267)
log(Rebel troop size)	0.036* (0.016)	-0.016 (0.053)
log(State troop size)	0.013 (0.020)	-0.005 (0.059)
Rebel advantage - troop size	-0.070 (0.128)	-0.363 (0.351)
Parity - troop size	-0.003 (0.132)	-0.411 (0.436)
Independent intervention	0.117 (0.080)	0.123 (0.239)
Legal political wing	0.102 (0.126)	0.336 (0.219)
log(GDPpc)	0.138* (0.059)	0.388** (0.130)
Democracy	-0.109 (0.138)	-0.562* (0.270)
log(Population)	-0.0002 (0.023)	-0.021 (0.066)
Oil	-0.262* (0.126)	-0.527† (0.315)
State external support	0.137* (0.056)	0.080 (0.177)
t	0.031* (0.014)	-0.078 (0.053)
t ²	-0.001 (0.001)	0.003 (0.002)
t ³	< 0.001 (< 0.001)	< -0.001 (< 0.001)
Constant	1.676 (1.322)	-2.081 (1.476)
N	660	660

Note: Reporting IV probit with robust standard errors clustered on dyad.

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Figures

Figure 1: A Model

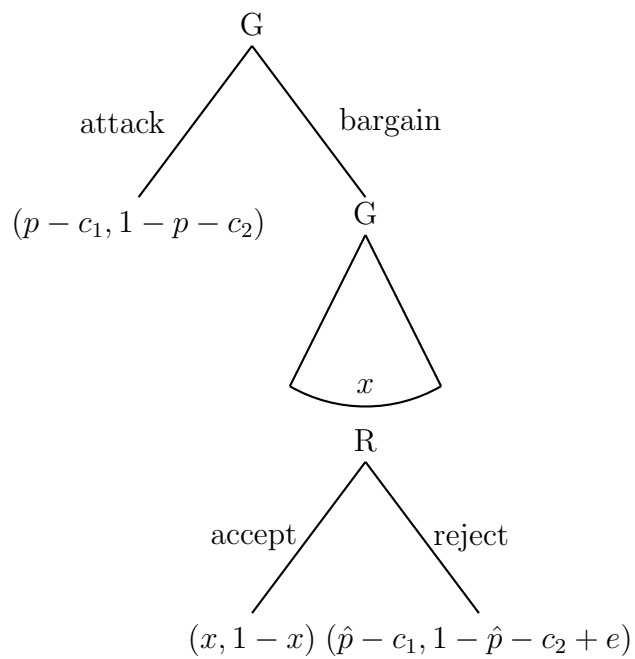
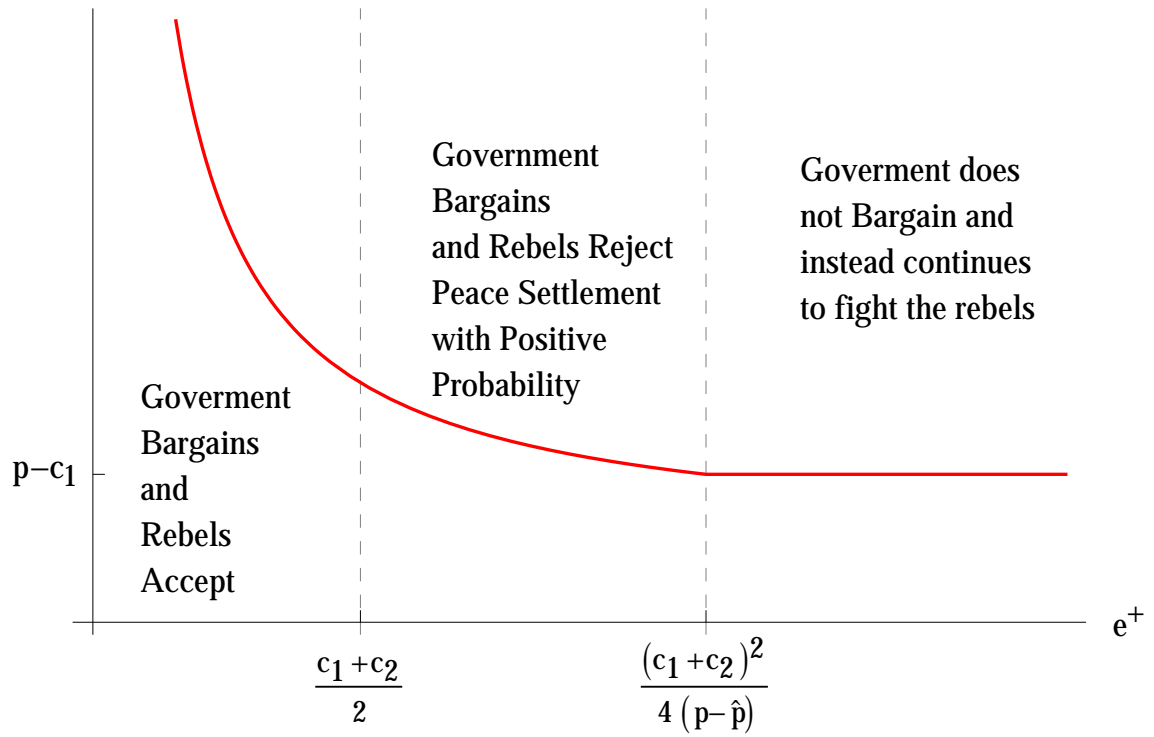


Figure 2: Equilibria with Asymmetric Information

Government's Payoff



Note: Figures produced using Mathematica version 9.